

**Application No.:** 10/582,468  
**Filing Date:** March 23, 2007

### **REMARKS**

In response to the Office Action mailed July 26, 2011, Applicant respectfully requests the Examiner to reconsider the above-captioned Application in view of the foregoing amendments and the following remarks. Accordingly, Claims 1, 3-7, 9-10, 14-16 and 18-20 are currently pending in the present Application.

#### **Prior Art Rejections**

Claims 1, 3-7, 9-10, 14-16 and 18-20 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Sachdeva (5,697,779) in view of Blanquaert (4,261,063). Applicant respectfully traverses the rejection of the pending claims.

The Office Action argues that Sachdeva discloses a dental implant sized and configured to fit within a hole in a jaw bone and that Blanquaert discloses a prosthetic pin that “inherently has a surface coating layer that is “70-100% anatase.” The Office Action then states that it would be obvious to modify Sachdeva by forming an anatase coating on the threaded portion of Sachdeva to protect the implant against long term oxidation. Applicant respectfully disagrees.

First, as was argued in the previous response, Blanquaert does not disclose a layer comprising 70-100% anatase. Accordingly, the proposed combination would not meet all of the limitations of the pending claims. The Office Action continues to assume that the mere mention of “anatase” in Blanquaert meets the claimed limitation and states that “it is inherently that 70%-100% of the surface coating layer is in anatase-phase titanium dioxide according to Blanquaert’s teaching of subjecting the assembly to anodic oxidation at 20-200volts.” However, because anatase often exists as a transition between the amorphous phase of titanium oxide and the rutile phase of titanium oxide, it is difficult to obtain layers of “70-100% anatase. Accordingly, “anatase” in the art can often simply refer to a layer with anatase as one component. As evidence, Applicant is submitting in an Information Disclosure Statement with this response an article entitled “Review of the anatase to rutile phase transformation.” By Hanaor and Sorrell. As stated in the article at page 1, column 2, anatase is metastable. That is, even small disturbances will cause anatase to transform irreversible into the rutile phase. Accordingly, Applicant respectfully submits that it is improper to assume that Blanquaert inherently discloses a layer of 70-100% anatase.

In addition, the standard for asserting that a property in the prior art is inherent is high. "The fact that a certain result or characteristic may occur or be present in the prior art is not sufficient to establish the inherency of that result or characteristic." MPEP 2112 "To establish inherency, the extrinsic evidence 'must make clear that the missing descriptive matter is *necessarily* present in the thing described in the reference, and that it would be so recognized by persons of ordinary skill. Inherency, however, may not be established by probabilities or possibilities. The mere fact that a certain thing may result from a given set of circumstances is not sufficient.'" *In re Robertson*, 169 F.3d 743, 745, 49 USPQ2d 1949, 1950-51 (Fed. Cir. 1999) (citations omitted, emphasis added) "In relying upon the theory of inherency, the examiner must provide a basis in fact and/or technical reasoning to reasonably support the determination that the allegedly inherent characteristic necessarily flows from the teachings of the applied prior art." *Ex parte Levy*, 17 USPQ2d 1461, 1464 (Bd. Pat. App. & Inter. 1990) (emphasis in original) However, as explained above and supported by the evidence submitted with this response, layers of 70-100% anatase are difficult to achieve and accordingly Blanquaert does not necessarily disclose such layers.

Even if, *for the sake argument*, Blanquaert did layers of 70-100% anatase, Applicant also submits that it would not be obvious to apply the coating of Blanquaert to the dental implant of Sachdeva. Forming an oxide coating through anodic oxidation creates heat. Temperatures that exceed 400°C can adversely affect the strength of a titanium substrate. Accordingly, one of skill in the art would not interpret Blanquaert's disclosure as applying to a small component, like a dental implant, that will be exposed to high loading and pressure

As has been noted in previous responses, while oxide coatings have been used in prior art dental implants, making the oxide coating 70-100% anatase require a significant amount of extra work (e.g., to maintain the dental implant at appropriate temperatures during the anodizing process) and greater expense for no apparent reason. To make the oxide coating 70-100% anatase, the temperature must be precisely controlled or the coating will move to the rutile phase as described above. However, there is no recognition in the art that prior art oxide coatings could be improved by using the anatase phase. Accordingly, there is no motivation for one of skill in the art to engage in the expensive and complicated process of maintaining the dental implant at appropriate temperatures during the anodizing process in order to form a layer of 70-100%

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anatase. One of skill in the art would not have been expected to confer any particular desirable property to that anatase coating over prior art oxide coatings. Rather one of skill in the art would have expected an anatase coating to act in a similar manner and thus would have no motivation to go through the extra work and expense in order to form the coating of 70-100% anatase.

**No Disclaimers or Disavowals**

Although the present communication may include alterations to the Application or claims, or characterizations of claim scope or referenced art, Applicant is not conceding in this Application that previously pending claims are not patentable over the cited references. Rather, any alterations or characterizations are being made to facilitate expeditious prosecution of this Application. Applicant reserves the right to pursue at a later date any previously pending or other broader or narrower claims that capture any subject matter supported by the present disclosure, including subject matter found to be specifically disclaimed herein or by any prior prosecution. Accordingly, reviewers of this or any parent, child or related prosecution history shall not reasonably infer that Applicant has made any disclaimers or disavowals of any subject matter supported by the present Application.

**CONCLUSION**

Applicant respectfully submits that the above rejections and objections have been overcome and that the present Application is now in condition for allowance. Therefore, Applicant respectfully requests that the Examiner indicate that the pending claims now acceptable and allowed. Accordingly, early issuance of a Notice of Allowance is most earnestly solicited.

Applicant respectfully submits that the claims are in condition for allowance in view of the above remarks. Any remarks in support of patentability of one claim, however, should not be imputed to any other claim, even if similar terminology is used. Additionally, any remarks referring to only a portion of a claim should not be understood to base patentability on that portion; rather, patentability must rest on each claim taken as a whole. Applicant respectfully traverses each of the Examiner's rejections and each of the Examiner's assertions regarding what the prior art shows or teaches, even if not expressly discussed herein. Although amendments have been made, no acquiescence or estoppel is or should be implied thereby. Rather, the

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amendments are made only to expedite prosecution of the present Application, and without prejudice to presentation or assertion, in the future, of claims on the subject matter affected thereby. Applicant also has not presented arguments concerning whether the applied references can be properly combined in view of, among other things, the clearly missing elements noted above, and Applicant reserves the right to later contest whether a proper reason exists to combine these references and to submit indicia of non-obviousness.

The undersigned has made a good faith effort to respond to all of the rejections in the case and to place the claim and drawings in condition for immediate allowance. Nevertheless, if any undeveloped issues remain or if any issues require clarification, the Examiner is respectfully requested to call Applicant's attorney in order to resolve such issue promptly.

Please charge any additional fees, including any fees for additional extension of time, or credit overpayment to Deposit Account No. 11-1410.

Respectfully submitted,

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Dated: 12-27-2011

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